

Remarks

This communication is responsive to the Final Office Action of December 14, 2007 and the Advisory Action of July 7, 2008. Reexamination and reconsideration of claims 1, 5-7, 11-13, 17-21, and 25-30 is respectfully requested.

Summary of The Office Action

Claims 1, 7, 13, 19, 29 and 30 were rejected under 35 U.S.C. §103(a) as being unpatentable over Claessens et al. (US Patent 7,222,255 B1)(Claessens) in view of Zerlan (US Patent 7,010,295 B1)(Zerlan).

Claims 5, 6, 11, 12, 17, 18, 20, 21, and 25-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Claessens and Zerlan in view of Beverly (US Patent 6,732,182 B1)(Beverly).

The Claims Patentably Distinguish Over the References of Record

Independent claims 1, 7, 13, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Claessens in view of Zerlan.

35 U.S.C. §103

To establish a prima facie case of 35 U.S.C. §103 obviousness, basic criteria must be met. The prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2143.(A) Section 2131 of the MPEP recites how "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). This same standard applies to 103 rejections as evidenced by Section 2143(A) of the MPEP, which reads: "The rationale to support a conclusion that the claim would have been obvious is that **all the claimed elements** were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions".

Additionally, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). This requirement is intended to prevent unacceptable "hindsight reconstruction" where Applicant's invention is recreated from references using the Application as a blueprint.

Here, the criteria for establishing a prima facie case of obviousness are not satisfied since the combination of references does not teach or suggest all the claim limitations. None of the references, alone and/or in combination, teach establishing a peak performance rate as the highest rate with no packet dropout when a constant stream of packets are sent from a packet generator to a packet count unit. Additionally, none of the references teach counting the number of

packets received without examining the contents of the received packets. Thus, none of the independent claims are obvious for at least these reasons. Accordingly, none of the dependent claims are obvious for at least the same reasons.

All the independent claims 1, 7, 13, and 19 include the elements of "sending a constant stream of packets" and "establishing a peak performance rate as the highest rate with no packet dropout". None of the references describe this elements.

The Applicant and the Examiner are having a good faith discussion over whether Claessens teaches establishing the peak performance rate based on the point at which the count of received packets lags behind the count of transmitted packets. Claessens teaches sending a pre-determined number of packets from a packet generator and producing a test record that reports on how many packets were received. The test record that is provided includes counts of packets received but does not include any data that establishes the peak performance rate. Instead, another program is tasked with examining test records to determine, "for example, latency, throughput, or delays associated with each transmission path." Claessens, col. 16, lines 5-6. Notably absent is a determination of the peak performance rate as the highest rate with no packet dropout.

The application as filed reads, on page 4, "To determine the performance level of a network-based system, typically network sessions are set up and packets are sent through the system to a count unit, where the contents of the packets are examined to detect errors." This description of the prior art appears to be a Claessens-like system. The application provides an improved test system that does not consume the resources of a Claessens-like system and that provides a useful measure of "peak performance rate". For Claessens to be able to produce the claimed element, the operation of Claessens would have to be changed to facilitate generating the traffic volume required to determine the rate.

To advance prosecution, claim 7 has been amended to add the limitation that the peak performance rate is established "without examining the contents of a

received packet". Merely the presence of the packet is required to establish the peak performance rate. No examination of packet contents (e.g., packet number) is required to establish the peak performance rate.

The application as filed reads, on page 6, "the performance rate of the network under test is established at the highest rate with no packet dropout." Similarly, page 11 reads, "the peak rate may be defined as the highest rate with no packet dropouts." A Claessens-like system can report on latency, throughput, and so on, at different packet send rates, but does not provide the claimed piece of data, the peak performance rate, as defined to be the maximum rate at which packets can be transmitted without losing packets. As described above, Claessens identifies that it is difficult, if possible at all, to determine this value because of the difficulties of generating sufficient network traffic. Since a static IP route is established between the sender and the receiver in the claims, this difficulty is overcome.

Both the Final Office Action and the Advisory Action assert that Claessens teaches establishing the peak performance rate. Both are incorrect. The Advisory Action reads, in section 11, "As cited in col. 2, lines 47-62, Claessens discloses test performance record (peak performance rate) is generated (established) based on latency, throughput, or delay at a point in which a device under test starts to drop packets." This statement is **incomplete**, is **inaccurately quoted**, and is being taken **out of context**.

The misquoted cited passage resides in the background of Claessens and accurately reads, in its entirety, "Testing of network devices is typically based on a throughput, or the ability to forward packets of various sizes ... measured in packets per seconds ("pps") with measureable delay (latency) and delay variability (jitter). Typically, the biggest challenge experienced during testing of network devices is the ability to generate enough traffic to determine a point where a device under test starts to drop packets." Thus, the portion of Claessens relied on to purportedly teach the claimed element is a background section sentence describing a "challenge" of conventional systems. It is not describing something

the Claessens does. Instead, it is saying that it is difficult to generate enough packets to stress a network to the point where packets are dropped. Therefore, Claessens is actually saying that conventional systems find it difficult, if possible at all, to determine a peak performance rate because they cannot generate enough traffic to make systems drop packets. It is clearly incorrect to base an obviousness rejection on a statement that says it is difficult and/or impossible to establish the value that is claimed.

Claessens describes a system and method for network performance testing. However, nowhere does Claessens describe the claimed “establishing a peak performance rate as the highest rate with no packet dropout”. The Office Action asserts that Claessens teaches the establishing at Col. 2, lines 47-62. However, this passage is silent concerning the claimed establishing. Line by line analysis of the passage yields no teaching of the claimed establishing. Rather, the line by line analysis proves that Claessens is describing a challenge for testing systems. It is describing how conventional systems cannot possibly establish the peak performance rate because they cannot generate sufficient network traffic. The application describes one approach to meeting the challenge identified in Claessens.

Sentence	Teaches “establishing”?
Some network applications may be less tolerant to traffic delays or losses than others.	No.
If infinite network resources were available, all application traffic could be carried at the application’s required rate with no packet loss.	No.
However, network resources are not infinite, and test performance systems for testing network equipment are	No.

necessary to optimize the network capacity.	
Testing of network devices is typically based on a throughput, or the ability to forward packets of various sizes between input (ingress) ports and output (egress) ports, measured in packets per second ("pps") with measurable delay (latency) and delay variability (jitter).	No.
Typically, the biggest challenge experienced during testing of network devices is the ability to generate enough traffic to determine a point where a device under test starts to drop packets and reaches a saturation point.	No.

Clearly no part of the cited passage teaches the claimed establishing. Careful review of the entire reference yields the same failing.

Claessens does teach generating a test performance record that can be used by a control network device to determine "latency, throughput, or delays associated with each transmission path." Col. 16, lines 5-7. None of these teach the claimed establishing. Thus, none of the independent claims are made obvious by Claessens. Accordingly, none of the dependent claims are made obvious by Claessens.

Zerlan describes a method for automatic testing of network elements. Although the Office Action does not even assert that Zerlan teaches the claimed establishing, careful review of the reference was undertaken and, like Claessens, revealed no teaching of the claimed establishing. Thus, none of the independent claims are made obvious by Zerlan or the combination of Claessens and Zerlan.


Beverly describes a method for generating a packet loss report. Once again, the Office Action does not even assert that Beverly teaches the claimed establishing. However, careful review of the reference was undertaken and, like

both Claessens and Zerlan, no teaching of the claimed establishing was discovered. Beverly describes, in at least Col. 5, lines 45-50, that "real-time summaries typically consist of 'flows-based' statistics, which detail characteristics of the traffic in terms of protocol distribution, byte volumes, packet volumes, packet sizes, etc." The type of report provided by Beverly describes "which packets were lost and which were out of sequence." Col. 10, lines 41-42. Knowing which packets were lost and which were out of sequence clearly requires examining the contents of a packet, at the very least a packet number identifier. While useful information, none of the items in Beverly teach the claimed "establishing". Thus, none of the independent claims are made obvious by Beverly, or the combination of Beverly, Claessens, and Zerlan. Accordingly, none of the dependent claims are made obvious by any of the references.

Conclusion

For the reasons set forth above, claims 1, 5-7, 11-13, 17-21, and 25-30 are now in condition for allowance. An early allowance of the claims is earnestly solicited.

Respectfully submitted,



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